

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : Peter A. Beerel, et al. Art Unit : 2133  
Serial No.: 09/848,778 Examiner : Joseph D. Torres  
Filed : May 3, 2001  
Title : REDUCED-LATENCY SOFT-IN/SOFT-OUT MODULE

**Mail Stop Appeal Brief - Patents**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

REPLY BRIEF

Pursuant to 37 C.F.R. § 41.41, Applicant responds to the Examiner's Answer as follows.

Applicants herewith file this Reply Brief directed only to the new points of argument. Most of those new points in argument are presented in section 10, response to argument.

On page 16, the rejection points out that "prefix and suffix operations" have been developed independently in error correction and computational mathematics/computer science". This statement does not appear to be supported by any evidence in the case, and with all due respect is improper for that reason.

On page 17, the patent office disputes our argument that the conclusion of obviousness is based on improper hindsight drawing on *In re McLoughlin*, 443 F.2d 1392. A copy of this case is attached. The case was about construction for railroad boxcars that carried palletized cargo. In making the opinion,

the court stated, on pages 1313-1314, that any judgment on obviousness "is in a sense necessarily reconstruction based on hindsight reasoning". However, the court went on to hold that hindsight reconstruction is improper. In fact, the court went on to say that the judgment on obvious must take into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made "and does not include knowledge gleaned only from applicants disclosure". In this particular case, the court went on to analyze the Cook patent, to show that it was suitable for using palletized loads, and the secondary references showed that it was well known to use side filler panels and bulkheads to confine palletized loads. There was no hindsight reconstruction here, both references were consistent and had consistent disclosures.

This compares with the present situation, where the secondary reference does not say anything about teaching to speed up computation, but rather teaches the opposite. The Thomson Leighton reference has data dependencies that prevent it from being parallelized. Modifying the primary reference in this way is turning the prior art on its head. The only incentive to make this kind of modification is applicants' own disclosure. This is real hindsight, not the kind of hindsight

that the CCPA found in McLoughlin to be inherent in all obviousness determinations.

In the last paragraph on page 17, the rejection somehow attempts to ignore claim language and discuss conversion of traditional serial algorithms to parallel algorithms. Whether this operation is or is not known in the art is irrelevant to the claim language. The issue here is whether the serial operations in Thomson Leighton could be parallelized. For reasons set forth in the main brief, they could not, without contradiction Thompson Leighton's own teaching.

At the bottom of page 21, a very troubling statement is made. The patent office appears to indicate that whether the Board reverses this case or not, that the "examiner will determine the best way to proceed". With all due respect, it is the patent office's obligation to provide a complete examination of the case each time an examination is provided. It is believed to be wholly improper for the Examiner to make statements suggesting that he will make another rejection if the Board reverses this one.

Again, the rejection made by the patent office is legally incorrect, since it does not follow the proper standard for combining references to find obviousness. For these reasons, reversal of the examiner's position is respectfully requested.

For these reasons, and the reasons stated in the Appeal Brief, Applicants submit that the final rejection should be reversed.

No fee is believed to be due, however please apply any charges or credits to Deposit Account No. 06-1050.

Respectfully submitted,

Date: April 9, 2007

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**C**

United States Court of Customs and Patent Appeals.  
Application of Gerald McLAUGHLIN.  
**Patent Appeal No. 8474.**

June 24, 1971.

Patent applicant appealed from a decision of Patent Office Board of Appeals, Serial No. 566,701, sustaining rejection of three claims in application and allowing one claim. The Court of Customs and Patent Appeals, Baldwin, J., held that applicant's secondary evidence was adequate to rebut initial inference of obviousness with respect to claim 15 of application for patent relating to an improved construction arrangement for railroad boxcars which are adapted for carrying unitized cargo, requiring reversal of decision of Patent Office Board of Appeals with respect to that claim which it held unpatentable in view of the prior art, but as to claims 13 and 14 of application the prima facie case of obviousness made out by prior arts stood un rebutted and the Board's rejection of such claims must be sustained.

Decision affirmed as to claims 13 and 14 and reversed as to claim 15.

## West Headnotes

**[1] Patents** ⚙️ **51(1)**291k51(1) Most Cited Cases

Test for combining references is not what individual references themselves suggest but rather what combination of disclosures taken as a whole would suggest to one of ordinary skill in the art.

**[2] Patents** ⚙️ **16(4)**291k16(4) Most Cited Cases

(Formerly 291k18)

While any judgment on obviousness is in sense necessarily a reconstruction based on hindsight reasoning, so long as judgment takes into account only knowledge which was within the level of ordinary skill at time claimed invention was made and does not include knowledge gleaned only from applicant's disclosure, such reconstruction is proper.

**[3] Patents** ⚙️ **36(1)**291k36(1) Most Cited Cases

(Formerly 291k36(2))

**[3] Patents** ⚙️ **36.2(1)**291k36.2(1) Most Cited Cases

(Formerly 291k36(1))

Inference of obviousness drawn from prior art disclosures is only prima facie justification for drawing ultimate legal conclusion that claimed invention is unpatentable, and it is imperative that such secondary consideration as commercial success be evaluated in determining final validity of conclusion even when claimed invention involves only a relatively simple mechanical concept. 35 U.S.C.A. § 103.

**[4] Patents** ⚙️ **32**291k32 Most Cited Cases

Applicant's secondary evidence was adequate to rebut initial inference of obviousness with respect to claim 15 of application for patent relating to an improved construction arrangement for railroad boxcars which are adapted for carrying unitized cargo, requiring reversal of decision of Patent Office Board of Appeals with respect to that claim which it held unpatentable in view of the prior art, but as to claims 13 and 14 of application the prima facie case of obviousness made out by prior arts stood un rebutted and the Board's rejection of such claims must be sustained.

**Patents** ⚙️ **328(2)**291k328(2) Most Cited Cases

3,217,664, 3,212,458, 3,163,130, 2,930,332. Cited.

**\*\*1393 \*1310** Norman Lettvin, Chicago, Ill., attorney of record, for appellant.

S. Wm. Cochran, Washington, D.C., for the Commissioner of Patents; R. V. Lupo, Washington, D.C., of counsel.

Before RICH, ALMOND, BALDWIN and LANE, Judges, and RE, Judge, United States Customs Court, sitting by designation.

BALDWIN, Judge.

McLaughlin has appealed from the decision of the Patent Office Board of Appeals sustaining the rejection of claims 13, 14 and 15 in his application [FN1]

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as unpatentable under 35 U.S.C. § 103 in view of the prior art. One claim has been held allowable.

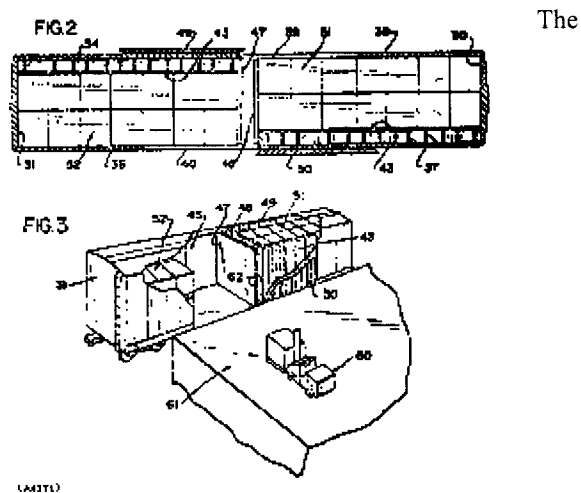
ENL Serial No. 566,701, filed July 5, 1966,  
for 'Compartment Arrangement for Railway  
Cars.'

## THE INVENTION

The subject matter of the claims on appeal may be characterized as an improved construction arrangement for railroad 'boxcars' which \*1311 are adapted for carrying 'unitized' cargo. The latter term is defined by appellant as 'cargo that is loaded upon a cargo-handling platform (such as a pallet or slip sheet) of a pre-selected size, and which is arranged for transfer between stations by devices such as fork-lift trucks.'

Appellant states that prior art arrangements, having the doorways located substantially centrally in the opposed sidewalls, leave the center of the car unsuitable for holding additional pallets securely because side filler panels cannot be placed over the doorways without inconveniencing loading and unloading.

The present invention, as represented in Figure 2 of the application, which we reproduce below along with Figure 3, is alleged to permit a larger volume of freight to be conveniently loaded in a car with the same overall dimensions.



car used in this arrangement has the door openings 39 (left hand occurrence) and 40 in the opposite side-

walls offset longitudinally so that each sidewall includes a long wall section and a short wall section on opposite sides of the opening. Side filler panels 43 and 45 are affixed to the interiors of the \*\*1394 long wall sections 37 and 34, respectively, and longitudinally adjustable bulkheads 47 and 48 are provided. \*1312 The car is shown completely filled with groups of palletized containers 51 and 52, secured in position by the side filler panels and bulkheads. The application describes the loading of this car as follows:

Typically, the load dividers 47 and 48 are initially moved to the left of doorway 40 to permit free access to the floor surface area in the 'deep end' of the car bounded by end wall 30. The pallets 51 are placed into the car in sequence, adjusting the side fillers to the necessary width required to firmly confine the pallets in place. During this time, door 49 is already closed to form the lateral support for the six pallet stacks 51 nearest load divider 48. The load divider 48 is then moved into position against the stacked pallets 51 and locked in place. The second load divider 47 is then temporarily positioned closely adjacent load divider 48 to permit free access to the 'short end' of the car terminated by end wall 31. Pallets 52 are then sequentially placed in position, adjusting the side fillers 45 to retain these pallets against lateral shifting. The three side fillers in the series 45 which are closest to the load divider 47 are preadjusted prior to loading the six pallet stacks 52 nearest load divider 47. Finally, load divider 47 is moved into tight engagement with the stacked pallets 52, locked in place, and the door 50 is closed to secure the pallets 52.

The only independent claim on appeal is claim 13 which we reproduce as follows:

13. An improved car-loading construction for use in elongated, wallenclosed railway cars of the type utilizing therein longitudinally movable load-confining transverse bulkheads which are adapted to be located generally centrally of the ends of the car to project across substantially the entire width of the car;

said improved car-loading construction comprising, in combination,

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the longitudinal side walls of the car each having a single doorway therein located between the ends of the wall to divide the wall into spaced long and short sections,

the doorways being offset toward different ends of the car so that the major portion of each doorway is directly opposite the long wall section of the opposing side wall, and

side filling panels mounted on the inside surface of each of said long wall sections and being adjustable toward and away from the corresponding long wall section, so that the transversely adjustable side filling panels on one long wall section and a longitudinally adjustable transverse bulkhead may cooperate to substantially fully enclose the load in one end of the car substantially to the mid-point of the car without adversely affecting the ability to load the other end of the car.

Claim 14 adds the additional limitations that the car is adapted to carry palletmounted loads and the lengths of the side walls of the car conform substantially to whole multiples of a dimension of a pallet. Claim 15 further provides that the portion of each doorway directly opposite a wall is 'substantially equal to a plural multiple of a dimension of the pallet' and that the rest of the doorway is narrower than a pallet dimension.

#### \*1313 THE REJECTION

Claims 13, 14 and 15 were rejected as unpatentable over Cook [FN2] in view of either Robertson [FN3] and Aquino [FN4] or of Lundvall, [FN5] under 35 U.S.C. § 103.

FN2. Patent No. 2,930,332, granted March 29, 1960.

FN3. Patent No. 3,212,458, granted October 19, 1965.

FN4. Patent No. 3,217,664, granted November 16, 1965.

FN5. Patent No. 3,163,130, granted December 29, 1964.

Cook discloses a railway boxcar having sides defining oversized door openings \*\*1395 in diagonally opposite ends of the car. That construction is described as facilitating loading and unloading lumber, permitting it to be palletized and to be handled by lift trucks.

Lundvall discloses a railway car provided with adjustable side filler panels for preventing lateral shifting of the load and adjustable bulkheads to hold the load against longitudinal shifting.

Robertson discloses a specific side filler panel construction for railway cars and Aquino is directed to a bulkhead construction for similar use.

The examiner and board based the r holdings that the appealed claims are unpatentable on the view that persons of ordinary skill in the art would find it obvious to use bulkheads and side filler panels, as disclosed in the secondary references, in connection with loads placed in a car of the Cook construction.

#### OPINION

Appellant has strenuously urged that the reference disclosures were improperly combined. In particular, with regard to Cook, he argues that, while the reference does show elongated, longitudinally offset doors, it does not suggest such an arrangement in combination with a bulkhead and side fillers because of the patentee's expressed desire to have a car capable of being loaded and unloaded simultaneously from both sides, which is not the desire of appellant nor even possible, he urges, with his arrangement.

[1][2] We have taken the above argument into consideration and do find that it has some merit. Nevertheless, it is not convincing. It should be too well settled now to require citation or discussion that the test for combining references is not what the individual references themselves suggest but rather what the combination of disclosures taken as a whole would suggest to one of ordinary skill in the art. Any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning, but so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made and does not include

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knowledge \*1314 gleaned only from applicant's disclosure, such a reconstruction is proper. The Cook patent does indicate that the car shown therein is suitable for carrying palletized loads with lift trucks being used for the loading and unloading, including stacking of the pallets. Since the secondary references show that it was well known to use side filler panels and bulkheads to confine palletized loads to prevent lateral and longitudinal shifting, we agree that those references would have suggested use of such panels and bulkheads with the Cook car for the same purpose.

[3] The foregoing conclusion in itself, however, is not determinative of the present appeal. Appellant has submitted evidence tending to prove that his invention has solved the longstanding problem of utilizing the maximum amount of space in standard, 50-ft. boxcars, permitting loading the car with 56 pallets of 48' X 40', whereas prior to the invention, cars of that size could be loaded with only 46 such pallets properly confined. The evidence, comprising two affidavits and a series of exhibits, indicates that the invention has been commercially successful and that its concept was promptly adapted by a competitor. Recognizing that the inference of obviousness drawn from the prior art disclosures is only prima facie justification for drawing the ultimate legal conclusion that the claimed invention is unpatentable under 35 U.S.C. § 103, it is imperative that such secondary considerations also be evaluated in determining the final validity of that legal conclusion. Graham v. John Deere Co., 383 U.S. 1, 86 S.Ct. 684, 15 L.Ed.2d 545 (1966). We emphasize that such is true even where, as here, the claimed invention involves only relatively simple mechanical concepts. As we have said on another occasion: 'A patentable invention, \*\*1396 within the ambit of 35 U.S.C. § 103, may result even if the inventor has, in effect, merely combined features, old in the art, for their known purpose, without producing anything beyond the results inherent in their use.' In re Spinnoble, 56 CCPA 823, 405 F.2d 578, 56 CCPA 823 (1969).

The first affidavit was by appellant, himself, the manager of the Customer Relations Department of the Equipco division of Unarco Industries, Inc., the assignee of the application. He asserts that 355 railway

cars equipped for use with his invention, valued at nearly eight million dollars, were ordered within little more than a year. Included with this affidavit are a series of reproductions of trade journal articles and advertisements tending to support the further assertion made in the affidavit, that the problem of effectively utilizing space was a familiar one. One exhibit is a copy of the advertisement of a competitor, tending to indicate that appellant's concept was adopted by that competitor. The other affidavit is by John Clement, general \*1315 traffic manager with the Corn Products Co. and apparently a disinterested third party. The affiant states that he has the duty of obtaining all the railroad and other types of cargo equipment necessary for shipping the company's products and that he became interested in the invention immediately upon its being disclosed to him because it appeared to solve problems presented by prior railway car arrangements, allowing use of substantially the entire cargo carrying capacity of the car while permitting truck loading. The affidavit further states that Corn Products had already received 10 cars possessing the proposed arrangement, had ordered 11 more and was negotiating for an additional forty.

The examiner did not consider the affidavits persuasive. That of Clement he characterized as alleging that appellant's arrangement is more versatile than prior arrangements without advancing any factual support. He regarded appellant's own affidavit as lacking sufficient facts to show that the asserted commercial success resulted from the invention as claimed. The board did not comment on either affidavit in its opinion.

[4] Our own consideration of the affidavits in light of appellant's arguments convinces us that there was a problem in the art due to floor space in the mid-section of cars with side doorways not ordinarily being usable for palletized goods which require securing against transverse and lateral shifting. Moreover, the favorable opinion Clement expressed of the invention and the showing of extensive purchases of equipment for utilizing it indicate that appellant provided an unobvious solution of the problem. The affidavits reveal the solution as involving the arrangement substantially as described in applicant's application. Thus an



arrangement is required wherein the relationship of the dimensions of the long and short wall sections and the door openings of the car are such that the pallets may be machine-loaded substantially to its full capacity. We note that these features are brought out fully only in claim 15 which recites that the long and short sections of the side walls are substantially equal to whole multiples of a dimension of a pallet and that the portions of the doorway directly opposite each other have a width equal to a plural multiple of a dimension of a pallet. As to that claim, we find appellant's secondary evidence adequate to rebut the initial inference of obviousness and, accordingly, reverse the decision of the board.

On the other hand, the affidavit showings do not demonstrate that an arrangement lacking any of the characteristics defined in claim 15 solved the previous space-utilization problem or that the commercial \*1316 success was due to less than all of those features. As to claims 13 and 14, thus, the prima facie case of obviousness made out by the prior art stands un rebutted and the board's decision \*\*1397 pertaining thereto must be sustained.

The decision of the board is affirmed as to claims 13 and 14 and reversed as to claim 15.

\*1310 Modified.